

What is claimed is:

1. A method of screening for the effect of a compound of interest on a target cell comprising:
 - a) introducing into the cell a DNA encoding the compound of interest operably linked to a regulatory sequence;
 - b) introducing into the cell a fusion protein comprising a protein transduction domain for entry of the fusion protein into the cell and a transcription activator region that binds to the regulatory sequence and activates transcription or transcribes the DNA;
 - c) comparing the cell to a baseline control.
2. The method of claim 1, wherein the baseline control is the cell before introduction of the fusion protein.
3. The method of claim 1, wherein the baseline control is a cell in which the fusion protein has not been introduced.
4. The method of claim 1, wherein the baseline control is a cell in which the fusion protein has a non-functional transcription activator region.
5. The method of claim 1, wherein the DNA regulatory sequence is obtained from a DNA sequence that is activated by E2F-1, cMyb 16 or Gal4.
6. The method of claim 1, wherein the protein transduction domain is obtained from a protein selected from TAT, Antennapedia homeodomain, HSV VP22 or a synthetic polypeptide.
7. The method of claim 1, wherein the transcription activator region comprises a DNA binding domain and a transactivation domain.
8. The method of claim 7, wherein the DNA binding domain and the transactivation domain are domains from a single protein.
9. The method of claim 7, wherein the DNA binding domain and the transactivation domain are domains from different proteins.
10. The method of claim 7, wherein the DNA binding domain is obtained from a protein selected from the group consisting of E2F- I, C-Myb, Fos, Gal4, EST1 and Elf-1.
11. The method of claim 7, wherein the transactivation domain is obtained from a protein selected from the group consisting of E2F-1, cMyb and VP16.

12. The method of claim 1, wherein the transcription activator region comprises a bacteriophage RNA polymerase.

13. The method of claim 12, wherein the bacteriophage RNA polymerase is selected from the group consisting of T7, SP6, GH1 and T3.

14. The method of claim 1, wherein the fusion protein further comprises a nuclear localization signal.

15. The method of claim 1 wherein the fusion protein is at least partially denatured when introduced into the cell.

16. A method for activating transcription of a DNA operably linked to a regulatory sequence in a host cell, comprising:

introducing into the cell a fusion protein comprising a protein transduction domain for entry of the fusion protein into the cell and a transcriptional activator that binds to the regulatory sequence and activates transcription of the target DNA.

17. The method of claim 16, wherein the regulatory sequence is obtained from a DNA sequence that is activated by E2F-1 or cMyb.

18. The method of claim 16, wherein the protein transduction domain is obtained from a protein selected from TAT, Antennapedia homeodomain, HSV VP22 or a synthetic polypeptide.

19. The method of claim 16, wherein the transcription activator region comprises a DNA binding domain and a transactivation domain.

20. The method of claim 19, wherein the DNA binding domain and the transactivation domain are each domains from a single protein.

21. The method of claim 19, wherein the DNA binding domain and the transactivation domain are domains from a different protein.

22. The method of claim 19, wherein the DNA binding domain is obtained from a protein selected from the group consisting of E2F- 1, C-Myb, Fos, Gal4, EST1 and Elf-1.

23. The method of claim 19, wherein the transactivation domain is obtained from a protein selected from the group consisting of E2F- 1, cMyb and VP16.

24. The method of claim 19, wherein the transcription activator region comprises a bacteriophage RNA polymerase.

25. The method of claim 24, wherein the bacteriophage RNA polymerase is selected from the group consisting of T7, SP6, GH1 and T3.

26. The method of claim 16, wherein the fusion protein further comprises a nuclear localization signal.

27. The method of claim 16 wherein the fusion protein is at least partially denatured when introduced into the cell.

28. A fusion protein comprising a protein transduction domain for entry of the fusion protein into the cell and a transcriptional activator that binds to the regulatory sequence and activates transcription or transcribes the target DNA.

29. The fusion protein of claim 28, further comprising a protein purification tag.

30. The fusion protein of claim 29, wherein the protein purification tag is a polyhistidine sequence.

31. The fusion protein of claim 28, wherein the fusion protein further comprises a nuclear localization signal.

32 32. The method of claim 32 wherein the expressed fusion protein forms inside inclusion bodies.

33 33. An isolated and purified DNA encoding the fusion protein of claim 28.

34 34. A plasmid that is pTAT/pTAT-HA.

35 35. A kit comprising:

a first container means which contains a recombinant vector for regulated transcription of a target nucleotide sequence, said vector comprising a nucleotide sequence linked by phosphodiester bonds comprising, in a 5' to 3' direction a cloning site for introduction of a nucleotide sequence to be transcribed, operatively linked to a regulatory sequence; and

a second container means which contains a fusion protein comprising a protein transduction domain for entry of the fusion protein into a cell and a transcriptional activator that binds to the regulatory sequence and activates transcription of the nucleotide sequence to be transcribed.